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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,085	10/21/2003	Toshiya Hagihara	1422-0609P	2826
2292	7590	07/19/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			MARCHESCHI, MICHAEL A	
PO BOX 747			ART UNIT	PAPER NUMBER
FALLS CHURCH, VA 22040-0747			1755	

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/689,085

Applicant(s)

HAGIHARA ET AL.

Examiner

Michael A Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/21/04, 6/16/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ina et al.

Ina et al. teach in the abstract, column 6, line 42-column 7, line 44 and the claims, a polishing composition for a substrate which comprises colloidal silica, water, an acid and an acid salt (carbonate). It is also stated that the composition contains transition metals in an amount less than 1 ppm.

The claimed invention is anticipated by the reference because the reference teaches all of the claimed limitations. In the alternative, no patentable distinction is seen to exist between the

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reference and the claimed invention in the absence of any evidence showing the contrary. The content of the transition metals (Cu) defined by the reference reads on the claimed content.

Claims 1-6 are rejected under 35 U.S.C. 102^{or e}(~~b~~) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takami et al.

Takami et al. teach in the abstract and the claims, a polishing composition for a substrate which comprises colloidal silica, water and an acid salt (bicarbonate). It is also shown that the composition contains Cu in an amount less than 100 ppb.

The claimed invention is anticipated by the reference because the reference teaches all of the claimed limitations. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention in the absence of any evidence showing the contrary. The content of Cu defined by the reference reads on the claimed content.

Claims 1 and 3-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Loncki et al.

Loncki et al. teach in the abstract, column 3, line 56-column 4, line 8, column 4, line 43-column 5, line 3 and the claims, a polishing composition for a substrate which comprises submicron silica, water and an acid salt (carbonate, etc.). It is also shown that the composition contains Cu in an amount less than 0.1 ppm.

The claimed invention is anticipated by the reference because the reference teaches all of the claimed limitations. In the alternative, no patentable distinction is seen to exist between the

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reference and the claimed invention in the absence of any evidence showing the contrary. The content of Cu defined by the reference reads on the claimed content.

Claim 2 is rejected under 35 U.S.C. 103(a) as obvious over Loncki et al.

Loncki et al. teach that submicron silica is used and this broadly encompasses and therefore makes obvious colloidal silica because it is colloidal in nature absent evidence to the contrary.

Claims 1 and 3-6 are rejected under 35 U.S.C. 102^{or e}(~~b~~) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ohno et al.

Ohno et al. teach in the abstract, sections [0001], [0027], [0028] and [0036] and the claims, a polishing composition for a substrate which comprises submicron (nanometer sized) silica, water and an acid salt (periodate). It is also shown that the composition contains Cu in an amount less than 100 ppb.

The claimed invention is anticipated by the reference because the reference teaches all of the claimed limitations. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention in the absence of any evidence showing the contrary. The content of Cu defined by the reference reads on the claimed content.

Claim 2 is rejected under 35 U.S.C. 103(a) as obvious over Ohno et al.

Ohno et al. teach that nanometer sized (submicron) silica is used and this broadly encompasses and therefore makes obvious colloidal silica because it is colloidal in nature absent evidence to the contrary.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as obvious over GB 2,354,524 alone or in view of Takami et al.

The GB reference teaches in the abstract, page 10, line 15-page 11, line 9 and page 12, line 13, a polishing composition for a substrate which comprises colloidal silica, water and an acid or salt thereof. This reference is silent with respect to the Cu content in an amount less than 100 ppb.

Takami et al. teach in column 4, lines 51-64 that minimizing or eliminating (at most 50 ppb) the amount of Cu in polishing composition provides a polishing composition that produces beneficial results.

With respect to the impurity concentration (Cu content), it is the examiners position that since the GB reference fails to mention this (criticality), it can be reasonably presumed and therefore obvious that the impurity level can be within the claimed values in the absence of any evidence showing the contrary. In addition, one skilled in the art would have found it obvious to produce a slurry having none or an extremely small impurity level in order to optimize the slurry polishing performance (i.e. impurities in the slurry will hinder the polishing performance because they will come into contact with the substrate which is not desired and diminish the polishing performance of the composition). In the alternative, it is the examiners position that one skilled in the art would have found it obvious to make the polishing composition according to the GB

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reference having a low Cu content (less than 50 ppb) because Takami et al. teach the beneficial results obtained when the Cu content is limited to this range in polishing composition. Any limitation known to provide beneficial results to the claimed composition is well within the level of ordinary skill in the art.

In the above rejections applicants are reminded that the intended use (claim 3) of the composition provides no patentable weight to the composition.

In view of the teachings as set forth above, it is the examiners position that the references reasonably teach or suggest the limitations of the rejected claims.

"A reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545, 549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968)". In addition, "A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

"A generic disclosure renders a claimed species prima facie obvious. *Ex parte George* 21 USPQ 2d 1057, 1060 (BPAI 1991); *In re Woodruff* 16 USPQ 2d 1934; *Merk & Co. v. Biocraft Lab. Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1983); *In re Susi* 169 USPQ 423 (CCPA 1971)".

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The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976)".

Evidence of unexpected results must be clear and convincing. *In re Lohr* 137 USPQ 548. Evidence of unexpected results must be commensurate in scope with the subject matter claimed. *In re Linder* 173 USPQ 356.

The references cited on the 1449 have been reviewed by the examiner and are considered to be art of interest since they are cumulative to or less than the art relied upon in the above rejections.

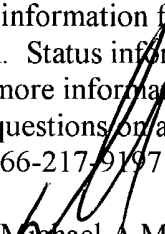
Any foreign language documents submitted by applicant has been considered to the extent of the short explanation of significance, English abstract or English equivalent, if appropriate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L Bell can be reached on (571) 272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7/14/04
MM


Michael A Marcheschi
Primary Examiner
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